CLAIMS

1. An optical switch having a sealing structure and connected to at least one input fiber and at least one output fiber, comprising:

a top housing defining a ringed channel;

a bottom housing defining a ringed channel;

a switching device for switching signals between the at least one input fiber and the at least one output fiber; and

a gasket defining at least one opening for admitting an entrance of the at least one input fiber and the at least one output fiber;

wherein, when the first and second housings are engaged with each other, the gasket is situated in the ringed channels of the housings and is deformed under the pressure of the engagement to fill the ringed channels of the top and bottom housings.

2. The optical switch having a sealing structure as claimed in claim 1, wherein the switching element comprises a driving arm holding a two-surface mirror, a holding element holding a reflector which is positioned opposite one surface of the two-surface mirror, and a driving means driving the two-surface mirror to move up and down.

3. The optical switch having a sealing structure as claimed in claim 1, wherein the top housing further comprises an inner wall and an outer wall, and the ringed channel is defined therebetween.

4. The optical switch having a sealing structure as claimed in claim 3, wherein the bottom housing further comprises an inner wall and an outer wall, and the ringed channel is defined therebetween.

5. The optical switch having a sealing structure as claimed in claim 4, wherein at least two semi-annular openings are respectively defined in the inner and outer walls of the top and bottom housings for entrance of the at least one input fiber and the at least one output fiber.

6. The optical switch having a sealing structure as claimed in claim 5, further comprising a fiber clamp for each fiber for holding the fiber therein.

7. The optical switch having a sealing structure as claimed in claim 6, wherein the fiber clamps each comprises a front flange, an annular groove and a rear flange, the annular groove of each fiber clamp engages with a corresponding opening of the gasket and with two corresponding semi-annular openings of each of the top and bottom housings.

8. The optical switch having a sealing structure as claimed in claim 5, wherein the gasket further comprises a quadrate flange, the at least one opening being defined in the quadrate flange.

9. The optical switch having a sealing structure as claimed in claim 8, wherein a quadrate groove for receiving the quadrate flange is formed between each pair of semi-annular openings in each of the top and bottom housings.

10. The optical switch having a sealing structure as claimed in claim 1, wherein the top housing and the bottom housing respectively comprise a plurality of screw holes, and the gasket comprises a plurality of through holes corresponding to the screw holes.

11. A sealing structure for optical components comprising:

a first housing defining a ringed channel;

a second housing defining a ringed channel; and

a gasket defining at least one opening for admitting an entrance of fibers;

wherein, the first and second housings together enclose a space wherein the operating parts of the optical component are situated, and when the first and second housings are engaged with each other, the gasket is situated in the ringed channels and between the first and second housings and deforms under pressure and fills the ringed channels of the first and second housings.

12. The sealing structure for optical components as claimed in claim 11, wherein the first housing further comprises an inner wall and an outer wall, and the ringed channel for receiving the gasket is defined therebetween.

13. The sealing structure for optical components as claimed in claim 12, wherein the second housing further comprises an inner wall and an outer wall, and the ringed channel for receiving the gasket is defined therebetween.

14. The sealing structure for optical components as claimed in claim 13, wherein at least two semi-annular openings are respectively defined in the inner and outer walls of the first and second housing for admitting the entrance of the fibers.

15. The sealing structure for optical components as claimed in claim 14, further comprising at least one fiber clamp for holding the fibers therein.

16. The sealing structure for optical components as claimed in claim 15, wherein the at least one fiber clamp comprises a front flange, an annular groove and a rear flange, the annular groove engages with the at least one opening of the gasket and the two semi-annular openings of the first and second housings.

17. The sealing structure for optical components as claimed in claim 16, wherein the gasket further comprises a quadrate flange, and the at least an opening is defined in the quadrate flange.

18. The sealing structure for optical components as claimed in claim 17, wherein a quadrate groove for receiving the quadrate flange is formed between the two semi-annular openings.

19. The sealing structure for optical components as claimed in claim 11, wherein the first housing and the second housing respectively comprise a plurality of screw holes, and the gasket has a plurality of through holes corresponding to the screw holes.

20. An sealing structure for use with optical components, comprising:

a first housing defining a first ringed channel;

a second housing defining a second ringed channel in compliance with said first ringed channel;

said first housing and said second housing abutting against each other with said first ringed channel and said second ringed channel communicatively facing each other in a vertical direction; and

a compressible gasket received within the first and second ringed channels; wherein

in a cross-section viewpoint, said gasket defines a first dimension along said vertical direction, before compressed, larger than a sum of those of said first and second ringed channels, and at least a portion of said gasket defines a second dimension perpendicular to said vertical direction, before compressed, smaller than that of one of said first and second ringed channels, so that a space is available in said one of the first and second ringed channels after the gasket is received in said first and second ringed channels, while before compressed, for receiving some deformed portions of the compressed gasket when said first and second housings

approach and are further fixedly abut against each other in said vertical direction.